

ABSTRACT

A lightweight bearing and wave gear drive are provided. An outer or inner bearing ring of the bearing has fixing holes to enable the ring 5 to be attached to another member. The parts of the bearing on which raceway surfaces are formed are made of an iron-based material, while the main bearing ring member is formed of a lightweight material that is lighter than the iron-based material. Surface portions that constitute fixing bolt seats are plated to increase the strength of such portions. The wave 10 gear drive includes a rigid internal gear, a flexible external gear located inside the internal gear, and a wave generator located inside the external gear. The internal and external gears are coupled by the lightweight bearing in a way that allows the gears to rotate relative to each other.